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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/804,096 | 03/19/2004 | Pierre Marraccini | 112701-535 | 7981 |
| 29157 | 7590 | 01/27/2006 | EXAMINER | |
| BELL, BOYD & LLOYD LLC P. O. BOX 1135 CHICAGO, IL 60690-1135 | | | FOX, DAVID T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1638 | |

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,096

Applicant(s)

MARRACCINI ET AL.

Examiner

David T. Fox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's amendments and arguments of 03 November 2005 have overcome the rejection of claims 1-6 and 12-14 under 35 USC 101.

Claim 7 remains rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject matter, as stated for claims 1-7 and 12-14 in the last Office action.

Applicant's arguments filed 03 November 2005 have been fully considered but they are not persuasive with regard to claim 7. Applicant urges that the claim amendments have obviated the product of nature rejection by reciting a method step which requires human intervention. The Examiner maintains that claim 7 is drawn to any coffee bean (or seed) "obtained from" a transformed coffee plant. However, due to Mendelian segregation of the transgene, not all progeny seeds would retain the antisense RNA-encoding construct. Those seeds/beans not containing said construct would be indistinguishable from naturally occurring coffee beans. Amending claim 7 to recite that the beans retain the antisense RNA-encoding construct would obviate this rejection. Suitable claim language must comply with 35 USC 112, first and second paragraphs.

Claims 1-7 and 12-14 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most

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nearly connected, to make and/or use the invention, as stated in the last Office action.

Applicant's arguments filed 03 November 2005 have been fully considered but they are not persuasive. Applicant urges that the enablement rejection is improper, given the amendment to claim 1, the alleged existence of data demonstrating reduced gene expression, the assertion that any antisense RNA – encoding sequence of any length and sequence would work, the assertion that evaluation of different antisense RNA-encoding constructs or fragments would not constitute undue experimentation, and the demonstration in the art that galactomannan branching and type will influence solubility.

The Examiner maintains that amended claim 1 does not specify which gene encoding which enzyme is being used as a source of the antisense RNA-encoding construct, and that amended claim 2 does not specify whether the antisense RNA-encoding construct corresponds to a full-length gene or any portion thereof of any length and sequence. The art cited by the Examiner provides ample evidence that antisense technology is unpredictable with regard to both gene inhibition as well as the recovery of desired or predicted phenotypic effects, including carbohydrate branching. Applicant's mere assertions to the contrary are not probative.

Regarding the alleged data, the Examiner notes that no actual data was provided with the response of 03 November 2005, so that the Examiner was unable to verify the significance of the data or its obtention using techniques and materials taught in the instant specification. Furthermore, the putative data

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appears to only address the issue of reduction of gene expression, not the actual alteration of solubility. Any data should be submitted in the form of a declaration under 37 CFR 1.132. No commitment is made to the consideration of any such declaration submitted after the mailing of the instant Final Office action.

Claims 1-7 and 12-14 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, as stated in the last Office action.

Applicant's arguments filed 03 November 2005 have been fully considered but they are not persuasive. Applicant urges that the written description rejection is improper, given the ability of the skilled artisan to construct an antisense RNA-encoding sequence based upon the single antisense RNA-encoding construct taught in the specification. The Examiner maintains that the specification only taught an antisense construct comprising a full-length gene from coffee which encodes alpha-D-galactosidase. In contrast, the claims do not recite any particular gene source, length or sequence (claims 1 and dependents). Even claim 2 does not recite a particular sequence length, so that it reads on a multitude of fragments of any length. The specification's single example of a full-length coffee alpha-D-galactosidase gene in antisense orientation does not constitute an adequate number of species to describe the broadly claimed genus.

No claim is allowed.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is 571-272-0795. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg, can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 19, 2006

DAVID T. FOX
PRIMARY EXAMINER
GROUP 180-1638

